

ANNEX 4: LIST OF REFERENCES

A4-1. Cited References

a. *U.S. Army Corps of Engineers.*

ER 1110-2-1150

ER 1110-2-1150, Engineering and Design for Civil Works Projects.

EM 1110-2-2000

EM 1110-2-2000, Standard Practice for Concrete for Civil Works Structures.

EM 1110-2-2006

EM 1110-2-2006, Roller Compacted Concrete.

EM 1110-2-2200

EM 1110-2-2200, Gravity Dam Design.

EM 1110-2-2201

EM 1110-2-2201, Arch Dam Design.

ETL 1110-2-254

ETL 1110-2-254, Finite Element Analysis- Interpretation and Documentation Guidelines.

ETL 1110-2-332

ETL 1110-2-332, Modeling of Structures For Linear Elastic Finite Element Analysis.

ETL 1110-2-343

ETL 1110-2-343, Structural Design Using the Roller-Compacted Concrete (RCC) Construction Process.

ETL 1110-2-365

ETL 1110-2-365, Nonlinear, Incremental Structural Analysis of Massive Concrete Structures.

ETL 1110-2-536

ETL 1110-2-536, Nonlinear Incremental Structural Analysis of Zintel Canyon Dam.

ETL 1110-8-16

ETL 1110-8-16 (FR), Fracture Mechanics Analysis of Concrete Hydraulic Structures.

U.S. Army Engineer Waterways Experiment Station 1949

U.S. Army Engineer Waterways Experiment Station. 1949. *Handbook for Concrete and Cement* (with periodic supplements), Vicksburg, MS.

Designation CRD C 16-94

Designation CRD C 16-94, "Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)." (ASTM C 78-94)

Designation CRD C 19-94

Designation CRD C 19-94, "Standard Test Method for Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression." (ASTM C 469-94)

Designation CRD C 23-91

Designation CRD C 23-91, "Standard Test Method for Specific Gravity, Absorption and Voids in Hardened Concrete." (ASTM C 642-90)

Designation CRD C 36-73

Designation CRD C 36-73, "Method of Test for Thermal Diffusivity of Concrete."

Designation CRD C 37-73

Designation CRD C 37-73, "Method of Test for Thermal Diffusivity of Mass Concrete."

Designation CRD C 38-73

Designation CRD C 38-73, "Method of Test for Temperature Rise in Concrete."

Designation CRD C 39-81

Designation CRD C 39-81, "Test Method for Coefficient of Linear-Thermal Expansion of Concrete."

Designation CRD C 44-63

Designation CRD C 44-63, "Method of Calculation of Thermal Conductivity of Concrete."

Designation CRD C 54-94

Designation CRD C 54-94, "Standard Test Method for Creep of Concrete in Compression." (ASTM C 512-87(94))

Designation CRD C 71-80

Designation CRD C 71-80, "Standard Test Method for Ultimate Tensile Strain Capacity of Concrete."

Designation CRD C 77-91

Designation CRD C 77-91, "Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens." (ASTM C 496-90)

Designation CRD C 124-73

Designation CRD C 124-73, "Method of Test for Specific Heat Aggregates, Concrete, and other Materials (Method of Mixtures)."

Designation CRD C 158-93

Designation CRD C 158-93, "Standard Test Method for Determining the Mechanical Properties of Hardened Concrete Under Triaxial Loads."

Designation CRD C 164-92

Designation CRD C 164-92, "Standard Test Method for Direct Tensile Strength of Cylindrical Concrete or Mortar Specimens."

U.S. Army Engineer Waterways Experiment Station 1990

U.S. Army Engineer Waterways Experiment Station. 1990. Rock Testing Handbook (with periodic supplements), Vicksburg, MS.

American Concrete Institute

American Concrete Institute. 1993. *ACI Manual of Concrete Practice*; Detroit, MI.

ACI 116R-90

ACI 116R-90, "Cement and Concrete Terminology," Part 1.

ACI 207.1R-87

ACI 207.1R-87, "Mass Concrete for Dams and Other Massive Structures," Part 1.

ACI 207.2R-90

ACI 207.2R-90, "Effect of Restraint, Volume Change, and Reinforcement of Cracking of Massive Concrete," Part 1.

ACI 207.4R-93

ACI 207.4R-93, "Cooling and Insulating Systems for Mass Concrete," Part 1.

ACI 207.5R-89

ACI 207.5R-89, "Roller Compacted Mass Concrete," Part 1.

American Society for Testing and Materials 1992

American Society for Testing and Materials. 1992. *1992 Annual Book of ASTM Standards*, Philadelphia, PA.

Designation D 3148-86

Designation D 3148-86, "Test Method for Elastic Moduli of Intact Rock Core Specimens in Uniaxial Compression."

Designation D 4535-85

Designation D 4535-85, "Test Method for Measurement of the Thermal Expansion of Rock Using a Dilatometer."

Other cited references.

American Society of Heating, Refrigerating and Air-Conditioning Engineers 1977

American Society of Heating, Refrigerating and Air-Conditioning Engineers. 1977. *ASHRAE Handbook and Product Directory - 1977 Fundamentals*, New York, NY.

Carlson 1937

Carlson, R. 1937. "A Simple Method for the Computation of Temperatures in Concrete Structures," *ACI Journal Proceedings*, Vol 34, No. 2, pp 89-102.

Fintel 1985

Fintel, M. 1985. *Handbook of Concrete Engineering - 2nd Edition*, Van Nostrand Reinhold, New York, NY.

Hibbitt, Karlsson, and Sorensen 1994

Hibbitt, Karlsson, and Sorensen. 1994. *ABAQUS User's Manual, Version 5.3.*, Pawtucket, RI.

Houghton 1976

Houghton, D. L. 1976. "Determining Tensile Strain Capacity of Mass Concrete." *ACI Journal Proceedings*, Vol 73, No. 12, 1976, pp 691-700.

Hunt 1986

Hunt, R. E. 1986. *Geotechnical Engineering Techniques and Practices*, McGraw-Hill, New York.

Jumikis 1977

Jumikis, A. R. 1977. *Thermal Geotechnics*, Rutgers University Press, New Brunswick, NJ.

Kersten 1949

Kersten, M. S. 1949. *Laboratory Research for the Determination of the Thermal Properties of Soils*, Engineering Experiment Station, University of Minnesota, Minneapolis, MN.

Polivka and Wilson 1976

Polivka, R. M., and Wilson, E. L. 1976. "Finite Element Analysis of Nonlinear Heat Transfer Problems," *SESM Report No. 76-2*, University of California, Berkeley.

Rawhouser 1945

Rawhouser, C. 1945. "Cracking and Temperature Control of Mass Concrete," *ACI Journal Proceedings*, Vol 41, No. 4, pp 305-348.

U.S. Army Engineer Waterways Experiment Station 1996

U.S. Army Engineer Waterways Experiment Station. 1996. "Concrete Thermal Study, Locks and Dam 2, 3, and 4, Monongahela River Project," Vicksburg, MS.

U.S. Department of the Interior, Bureau of Reclamation 1965

U.S. Department of the Interior, Bureau of Reclamation. 1965. "Control of Cracking in Mass Concrete Structures," *USBR Engineering Monograph 34*, Denver, CO.

Wilson 1968

Wilson, E. L. 1968. "The Determination of Temperatures within Mass Concrete Structures," *SESM Report No. 68-17*, University of California, Berkeley, 33 pp.

A4-2. Supplemental References.

Barrett, Foadian, James, and Rashid

Barrett, P. R., Foadian, H., James, R. J., Rashid, Y. R. "Thermal-Structural Analysis Methods for RCC Dams," *Roller Compacted Concrete - III*, American Society of Civil Engineers, New York, pp 407-422.

Burks 1947

Burks, S.D. 1947. "Five-Year Temperature Records of a Thin Concrete Dam," *ACI Journal Proceedings*, Vol 44, No. 1, Detroit, MI, pp 65-76.

Calvo, Sudón, and Pfeiffer 1995

Calvo, J., Sudón, J., and Pfeiffer, G. 1995. "Thermal Analysis of RCC Dams Methodology - Application to Ceniza Dam," *Roller Compacted Concrete Dams, Proceedings of the International Symposium*, pp 575-589.

Carlson, Houghton, and Polivka 1979

Carlson, R. W., Houghton, D. L., and Polivka, M. 1979. "Causes and Control of Cracking in Unreinforced Mass Concrete," *ACI Journal Proceedings*, Vol 76, No. 7, pp 821-837.

Carlson and Thayer 1959

Carlson, R. W., and Thayer, D. P. 1959. "Surface Cooling of Mass Concrete to Prevent Cracking," *ACI Journal Proceedings*, Vol 56, No. 2, Aug 1959, pp 107-120.

Ditchey and Schrader 1988

Ditchey, E. J., and Schrader, E. K. 1988. "Monksville Dam Temperature Studies," *Transactions 16th International Congress on Large Dams (San Francisco 1988)*, International Commission on Large Dams, Paris, pp 379-395.

Dusinberre, 1945

Dusinberre, D.M. 1945. "Numerical Methods for Transient Heat Flow," *Transactions American Society of Mechanical Engineers*, Vol 67, pp 703-772.

Fujisawa and Nagayama 1985

Fujisawa, T., and Nagayama, I. 1985. "Cause and Control of Cracks By Thermal Stress in Concrete Dams," *Transactions 15th International Congress on Large Dams (Lausanne 1985)*, International Commission on Large Dams, Paris, pp 117-142.

Garner and Hammons 1991

Garner, S., and Hammons, M. 1991. "Development and Implementation of Time-Dependent Cracking Material Model for Concrete," *Technical Report SL-91-7*, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS, pp 44.

Giménez and Fernández 1995

Giménez, E. C., and Fernández, J. 1995. "Prediction of the Thermal State of Dams Using Mathematical Models - Application to the Algar Dam (Valencia, Spain)," *Roller Compacted Concrete Dams, Proceedings of the International Symposium*, pp 591-609.

Hinks and Copley 1995

Hinks, J. L., and Copley, A. F. 1995. "Thermal Analysis For RCC Dams," *Roller Compacted Concrete Dams, Proceedings of the International Symposium*, pp 473-484.

Houghton 1969

Houghton, D. L. 1969. "Concrete Volume Change for Dworshak Dam," *Proceedings ASCE*, Vol 95, PO2, New York, pp 153-166.

Houghton 1970

Houghton, D. L. 1970. "Measures Being Taken for Prevention of Cracks in Mass Concrete at Dworshak and Libby Dams," *Transactions, 10th International Congress on Large Dams (Montreal 1970)*, International Commission on Large Dams, Paris.

Klein, Pirtz, and Adams, 1963

Klein, A., Pirtz, D., and Adams, R. 1963. "Thermal Properties of Mass Concrete During Adiabatic Curing," *Symposium on Mass Concrete*, ACI Special Publication SP-6, American Concrete Institute, Detroit, MI, pp 199-218.

Liu and McDonald 1978

Liu, T. C., and McDonald, J. E. 1978. "Prediction of Tensile Strain Capacity of Mass Concrete," *ACI Journal Proceedings*, Vol 75, No. 5, Detroit, MI, pp 192-197.

Mead

Mead, A. R. "Temperature-Instrumentation Observations at Pine Flat Dam and Folsom Dams," *Symposium on Mass Concrete*, ACI Special Publication SP-6, American Concrete Institute, Detroit, MI, pp 151-178.

Neville 1981

Neville, A. M. 1981. *Properties of Concrete*, Wiley, New York.

Norman and Anderson 1985

Norman, C. D., and Anderson, F. A. 1985. "Reanalysis of Cracking in Large Concrete Dams in the US Army Corps of Engineers," *Transactions 15th International Congress on Large Dams (Lausanne 1985), Proceedings*, International Commission on Large Dams, Paris, pp 157-171.

Polivka, Pirtz, and Adams 1963

Polivka, M., Pirtz, D., Adams, R. 1963. "Studies of Creep in Mass Concrete," *Symposium on Mass Concrete*, ACI Special Publication SP-6, American Concrete Institute, Detroit, MI, pp 257-285.

Raphael 1984

Raphael, Jerome M. 1984. "Tensile Strength of Concrete," *ACI Journal Proceedings*, Vol 81, No.2, Detroit, MI, pp 158-165.

Rhodes, 1978

Rhodes, J. A. 1978. "Thermal Properties," *Significance of Tests and Properties of Concrete and Concrete Making Materials*, STP-169B, American Society for Testing and Materials, Philadelphia, PA, pp 242-266.

Ross and Bray 1949

Ross, A. D., and Bray, J. W. 1949. "The Prediction of Temperatures in Mass Concrete by Numerical Computation," *Magazine of Concrete Research*, Vol 1, No. 1, London, pp 9-20.

Saetta, Scotta, and Vitaliani 1995

Saetta, A., Scotta, R., and Vitaliani, R. 1995. "Stress Analysis of Concrete Structures Subjected To Variable Thermal Loads," *Journal of Structural Engineering*, Vol 121, No. 3, American Society of Civil Engineers, New York, pp 446-457.

Salete, Lancha, and Marco 1995

Salete, E., Lancha, J. C., and Marco, C. 1995. "Sensibility of Thermal Transfer Analysis of Dams on the Convection Coefficient," *Roller Compacted Concrete Dams, Proceedings of the International Symposium*, pp 611-624.

Sánchez and Gonzalez-Elipe 1995

Sánchez, E. A., and Gonzalez-Elipe, J. M. 1995. "Thermal Analysis and Behavior of the Arriaran Dam," *Roller Compacted Concrete Dams, Proceedings of the International Symposium*, pp 1069-1081.

Sereno and Peloché 1995

Sereno, M. G., and Peloché, J. 1995. "A Thermal Study of the Sierra Brava Dam - A Comparison of a Mathematical Model With Real Temperature Recordings," *Roller Compacted Concrete Dams, Proceedings of the International Symposium*, pp 1105-1124.

Tatro and Schrader 1992

Tatro, Stephen B., and Schrader, Ernest K. 1992. "Thermal Analysis of RCC - A Practical Approach," *Roller Compacted Concrete - III*, American Society of Civil Engineers, New York, pp 389-406.

Tennessee Valley Authority 1950

Tennessee Valley Authority. 1950. "Measurements of the Structural Behavior of Norris and Hiwassee Dams," *Technical Monograph No. 67*, Knoxville, TN.

Touloukian, et al. 1970

Touloukian, Y., et al. 1970. *Thermophysical Properties of Matter*, Purdue University Thermophysical Properties Research Center, West Lafayette, IN.

Townsend

Townsend, C. L. "Control of Temperature Cracking in Mass Concrete," *Causes, Mechanism, and Control of Cracking in Concrete*, ACI Special Publication SP-20, American Concrete Institute, Detroit, pp 119-139.

Waugh and Rhodes 1959

Waugh, W. R., and Rhodes, J. A. 1959. "Control of Cracking in Concrete Gravity Dams," *Proceedings ASCE*, Vol. 85, PO5, New York, pp 1-20.

Yamazumi, Harita, Jikan, and Kido 1995

Yamazumi, A., Harita, K., Jikan, S., and Kido, K. 1995. "A Study of Thermal Control on RCD Dam," *Roller Compacted Concrete Dams, Proceedings of the International Symposium*, pp 493-507.